Amendments To Claims

Claims 1-14 (Canceled).

15. (New) A method for generating a hologram, comprising the steps of:

determining a holographic interference pattern in response to a description of an object;

partitioning the holographic interference pattern into a set of partitions;

determining a representation of the interference pattern for each partition;

printing the holographic interference pattern onto a transparent print medium in response to the representations;

directing a light beam onto the transparent print medium such that the holographic interference pattern in the transparent print medium modifies the light beam to provide a person viewing the transparent print medium with a three-dimensional image of the object.

16. (New) The method of claim 15, wherein for each partition the step of determining a representation includes the steps of:

determining a weight for each of a set of basis interference patterns;

combining the basis interference patterns according to the weights.

17. (New) The method of claim 16, wherein the step of printing includes the steps of:

storing the basis interference patterns in a printer;

transferring the weights to the printer such that the printer performs the step of combining the basis interference patterns according to the weights.

18. (New) The method of claim 15, wherein the step of printing includes the step transferring the representations to the printer such that the printer prints the representation for each partition onto the transparent medium.

19. (New) An apparatus for generating a hologram, comprising:

means for determining a holographic interference pattern in response to a description of an object;

means for partitioning the holographic interference pattern into a set of partitions;

means for determining a representation of the interference pattern for each partition;

means for printing the holographic interference pattern onto a transparent print medium in response to the representations;

means for directing a light beam onto the transparent print medium such that the holographic interference pattern in the transparent print medium modifies the light beam to provide a person viewing the transparent print medium with a three-dimensional image of the object.

20. (New) The apparatus of claim 19, wherein the means for determining a representation includes:

means for determining a weight for each of a set of basis interference patterns;

means for combining the basis interference patterns according to the weights.

21. (New) The apparatus of claim 20, wherein the means for printing includes:

means for storing the basis interference patterns in a printer;

means for transferring the weights to the printer such that the printer performs the step of combining the basis interference patterns according to the weights.

22. (New) The apparatus of claim 19, wherein the means for printing includes means for transferring the representations to the printer such that the printer prints the representation for each partition onto the transparent medium.

23. (New) A system for providing a hologram, comprising:

printer that stores a set of basis interference patterns;

computer that determines a holographic interference pattern in response to a description of an object and that determines a set of weights for the basis interference patterns in response to the holographic interference pattern and that transfers the weights to the printer such that the printer prints the holographic interference pattern onto a transparent print medium using the basis interference patterns in response to the weights.

24. (New) The system of claim 23, further comprising a light source for directing a light beam onto the transparent print medium such that the holographic interference pattern in the transparent print medium modifies the light beam to provide a person viewing the transparent print medium with a three-dimensional image of the object.

25. (New) The system of claim 24, wherein the printer reconstructs the holographic interference pattern by combining the basis patterns according to the weights.